

IN THE CLAIMS:

Claim 1 (original): An evacuation system, comprising:

a housing including a product package containing a product; and
an evacuation member disposed in the housing, wherein the evacuation member engages the product package and applies pressure thereto, such that product in the product package moves toward an outlet in the product package for dispensing.

Claim 2 (original): The evacuation system according to claim 1, further comprising:

a valve disposed at the outlet of the product package to regulate the flow therefrom.

Claim 3 (original): The evacuation system according to claim 2, wherein the valve is a pinch valve.

Claim 4 (original): The evacuation system according to claim 1, wherein a pump is coupled to the product package for evacuating the product from the package.

Claim 5 (original): The evacuation system according to claim 1, the evacuation system further comprising a driver to move the evacuation member.

Claim 6 (original): The evacuation system according to claim 5, wherein the driver is a motor.

Claim 7 (original): The evacuation system according to claim 5, wherein a controller opens the valve and drives the driver for a predetermined period, thereby dispensing product from the package.

Claim 8 (original): The evacuation system according to claim 7, wherein the controller monitors the voltage applied to the driver, thereby deducing the forces applied to the product package.

Claim 9 (original): The evacuation system according to claim 8, wherein the controller operates the evacuation member to preload the package.

Claim 10 (original): The evacuation system according to claim 9, wherein the controller maintains the force applied to the product package by the evacuation member below a maximum threshold to ensure that the product package does not rupture.

Claim 11 (original): The evacuation system according to claim 7, further comprising an encoder in communication with the driver and the controller, wherein the encoder outputs a signal to the controller indicating the location of the evacuation member.

Claim 12 (original): The evacuation system according to claim 11, wherein the controller recognizes a maximum encoder count when the evacuation member has reached full travel, thereby indicating that the product package is empty.

Claim 13 (original): The evacuation system according to claim 7, wherein a microswitch is closed when the evacuation member reaches full travel, thereby notifying the controller that the package is empty.

Claim 14 (original): The evacuation system according to claim 7, wherein a hall effect sensor is activated when the evacuation member reaches the end of the travel path, thereby signaling the controller of an empty package condition.

Claim 15 (original): The evacuation system according to claim 1, wherein the housing further comprises a backing plate to provide a bearing surface for the evacuation member.

Claim 16 (original): The evacuation system according to claim 1, wherein the evacuation member adjusts for varying particulate sizes.

Claim 17 (original): The evacuation system according to claim 1, wherein the evacuation member comprises at least one roller to engage the product package.

Claim 18 (original): The evacuation system according to claim 17, wherein the roller is weighted to move through the travel path due to gravitational forces.

Claim 19 (original): The evacuation system according to claim 1, wherein the evacuation member comprises at least one squeegee to engage the product package.

Claim 20 (original): The evacuation system according to claim 19, wherein the squeegee is weighted to move through the travel path due to gravitational forces.

Claim 21 (original): The evacuation system according to claim 4, further comprising:

a pump driver unit disposed in the housing, wherein the pump is coupled to the pump driver to actuate the pump, thereby evacuating the product from the product package.

Claim 22 (original): The evacuation system according to claim 1, further comprising:

a package carrier, the package carrier including a package support and a restraining support hingedly coupled to the package support, wherein a product package is inserted into the package support and the restraining support is closed, thereby easing handling and support during insertion into the housing.

Claim 23 (original): The evacuation system according to claim 22, wherein the package carrier includes a pinch-off area, whereby, when the restraining support is closed, product is displaced from an unrecoverable portion of the product package, and the unrecoverable portion is pinched off, such that the product remains in a recoverable portion of the product package.

Claim 24 (original): The evacuation system according to claim 23, wherein the pinch-off area creates a product package volume having a bottom with a slope toward the product package outlet, thereby forcing product to move toward a recoverable portion of the product package.

Claim 25 (original): The evacuation system according to claim 7, wherein the controller determines a frictional voltage profile for the evacuation member and adds the frictional profile to a working voltage profile, thereby ensuring that the evacuation member applies a desired squeeze force to the product package.

Claims 26-37 (canceled)

Claim 38 (original): A product dispensing system, comprising:

a primary device; and

an evacuation system in fluid and control communication with the primary device, such that the primary device provides control signals to the evacuation system to commence a dispensing routine, and further wherein the evacuation system conducts the dispensing routine for delivery of product to the primary device.

Claim 39 (original): The product dispensing system according to claim 38, wherein the primary device is a pizza sauce applicator.

Claim 40 (original): The product dispensing system according to claim 38, wherein the evacuation system comprises an evacuation member that engages a product package disposed within the evacuation system, and further wherein the evacuation member applies pressure to the product package, such that a product in the product package moves toward an outlet for dispensing.

Claim 41 (original): The product dispensing system according to claim 40, further comprising:

a valve disposed at the outlet of the product package to regulate the flow therefrom.

Claim 42 (original): The product dispensing system according to claim 40, wherein a pump is coupled to the product package for evacuating the product from the package.

Claim 43 (original): The product dispensing system according to claim 40, wherein the evacuation system further comprises a driver to move the evacuation member.

Claim 44 (original): The product dispensing system according to claim 40, wherein a controller opens the valve and drives the driver for a predetermined period, thereby dispensing product from the package.

Claim 45 (original): The product dispensing system according to claim 44, wherein the controller monitors the voltage applied to the driver, thereby deducing the forces applied to the product package.

Claim 46 (original): The product dispensing system according to claim 44, wherein the controller operates the evacuation member to preload the package.

Claim 47 (original): The product dispensing system according to claim 44, wherein the controller maintains the force applied to the product package by the evacuation member below a maximum threshold to ensure that the product package does not rupture.

Claims 48-49(canceled)